

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 10/507,221
Applicant : Mark M. GOODMAN et al.
Filed : April 15, 2005
TC/A.U. : 1621
Examiner : Paul A. Zucker
For : Tumor Imaging Compounds
Docket No. : 51-02
Customer No.: 23713

Confirmation No. 2692

CERTIFICATE OF EFS-WEB FILING	
I hereby certify that this correspondence is being submitted with the USPTO EFS-WEB system on the date indicated below.	
<i>11/18/05</i> Date	<i>Cathy Nelson</i> Cathy Nelson

DECLARATION OF MARK M. GOODMAN

I, Mark M. Goodman, the undersigned, hereby declare as follows:

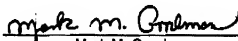
1. I am a co-Inventor of U.S. Patent application 10/507,221, filed April 15, 2005.
2. I have been employed at Emory University since October 1, 1993. I currently hold the position of Endowed Chair for Imaging Sciences and Professor, Radiology, Psychiatry and Hematology and Oncology. I am principal investigator and lab director of a research program that includes graduate students, post-doctoral fellows and lab technicians. My *curriculum vitae* is included herewith as Appendix A.
3. My research at Emory University has been generally directed toward design, synthesis and evaluation of isotopically labeled compounds for use in connection with medical imaging technologies such as positron emission tomography (PET) and single photon emission computed tomography (SPECT). The subject patent resulted from research initiated by me and directed by me in my laboratory.
4. The invention claimed in U.S. Patent application 10/507,221 includes the compound N-methyl-2-amino-2-methyl-3-fluoropropanoic acid (N-Me FAMP) and its radiolabeled version, ^{18}F N-Me FAMP. I conceived the structure of N-Me FAMP and ^{18}F N-Me FAMP as a compound useful as a marker for tumor imaging.
5. Jonathan McConathy was a graduate student at Emory University employed from 1999 to 2003 in my lab. Dr. McConathy and I devised a method to synthesize ^{18}F N-Me FAMP. The compound ^{18}F N-Me FAMP and the method of synthesizing it were joint inventions of myself and Jonathan McConathy and no others.
6. Claim 1 of patent application 10/507,221 includes the compound ^{18}F N-Me FAMP. The structure and synthesis of ^{18}F N-Me FAMP, invented by myself and

Jonathan McConathy, was presented at the 48th Annual Meeting of the Society of Nuclear Medicine in Toronto Canada, from June 23-27, 2001. The abstract was published in J. Nuclear Medicine, May 2001 Supplement, Volume 42, Number 5, 149P. Coauthors of the abstract were J. McConathy, L. Martarello, E. J. Malveaux, V. M. Camp, G. D. Bowers, J. J. Olson, M. M. Goodman. The structure and synthesis of ¹⁸F N-Me FAMP were also presented at the Fourteenth International Symposium on Radiopharmaceutical Chemistry in Interlaken, Switzerland, from June 10-15, 2001. The symposium abstract was published in J. Labelled Cpd. Radiopharm. 2001, Volume 44, Suppl. 1, S376-S378. Coauthors of the abstract were J. McConathy, L. Martarello, and M. M. Goodman. Of the group of co-authors of both abstracts and presentations, only Jonathan McConathy and myself are co-Inventors of the claimed compound. Co-authors Martarello, Malveaux, Camp, Bowers and Olson were employed in the lab under my direction. They assisted in carrying out procedures under the direction of myself or Jonathan McConathy. They did not contribute to making the invention.

7. I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the above-referenced application or any patent issuing thereon.

11/14/02

Date



Mark M. Goodman

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**EMORY UNIVERSITY SCHOOL OF MEDICINE
CURRICULUM VITAE**

Revised: 01/09/2006

1. Name: MARK M. GOODMAN, PH.D.
2. Current Titles and Affiliations:
 - a. Academic appointments:
 1. Professor of Radiology, Emory University, Atlanta, Georgia, October 1993 to present
 2. Professor of Psychiatry, Emory University, Atlanta, Georgia, July 1, 1999 to present
 3. Professor of Hematology and Oncology, Emory University, Atlanta, Georgia, June 1, 2003 to present
 - b. Clinical appointments:

Director of P.E.T. Chemistry, Emory Center for Positron Emission Tomography,
Department of Radiology, Emory University, Atlanta, Georgia, October 1993 to Present
 - c. Other administrative appointments:

Director, Division of Radiological Sciences, Emory University, Atlanta, Georgia,
September 1, 2001 to present
3. Birth Date and Place: February 14, 1948
New York, NY
4. Citizenship: U.S.
5. Office Address: Mailing Address: Department of Radiology: Telephone: 404-727-9366
Emory University School of Medicine
1364 Clifton Road, N.E.
Atlanta, GA 30322
- Office Location: Room 1203 C
Woodruff Memorial Building

6. E-mail Address: mgoodma@emory.edu
7. Licensures/Boards: None/None
8. Education:
- | | | | |
|-----------|-------------------|-----------------------|---------------------------|
| 1956-1969 | B.A. Chemistry | Monmouth College | |
| 1969-1973 | Chemistry | Ohio University | |
| 1973-1976 | Ph.D. - Chemistry | University of Alabama | William W. Paudler, Ph.D. |
9. Postgraduate Training;
- | | | |
|--|---------------------------|-----------|
| University of Alabama Post-Doctoral Fellowship | William W. Paudler, Ph.D. | 1976-1977 |
| Yale University Post-Doctoral Fellowship | Matthew Thakur, Ph.D. | 1978 |
| Harvard University Post-Doctoral Fellowship | David R. Elmaleh, Ph.D. | 1978-1980 |
10. Military or Government Service:
- | | |
|------|--|
| 1970 | U.S. Army Reserve |
| 1971 | Reserve Officer Basic Training, Fort Knox, KY |
| 1974 | Reserve Office Advanced Training, Fort Riley, KS |
| 1974 | Commissioned 2nd Lieutenant, Fort Riley, KS |
| 1975 | Basic Officers Course (Ordinance), Aberdeen Proving Ground, Aberdeen, MD |
| 1987 | Honorable Discharge |
- Current Status: U.S. Army Inactive Reserve, Captain
11. Previous Academic and Professional Appointments
- | | | |
|-----------|---|-------------------------------|
| 1980-1987 | Staff Scientist, Nuclear Medicine Group | Oak Ridge National Laboratory |
| | Martin Marietta Energy Systems, Inc. | |

1987-1993	Associate Professor, Dept. of Radiology	University of Tennessee, Knoxville, TN
	Associate Professor, Medical Biology	University of Tennessee, Knoxville, TN
June 1993	Professor, Dept. of Radiology	University of Tennessee, Knoxville, TN

12. Previous Administrative Appointments:

1987	Director of Radiopharmaceutical Development, Dept. of Radiology, Univ. of Tennessee Medical Center.
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13. Committee Memberships:

a. National and International:

1997	Invited to serve on the 1997 Scientific Program Committee for the Twelfth [June 14-19] International Symposium on Radiopharmaceutical Chemistry, Uppsala, Sweden
2002	Invited to serve as Sub-chair Neuroscience Radiopharmaceutical Chemistry Track the 2002 Scientific Program Committee for the 49 th [June 15-19] Society of Nuclear Medicine Annual Meeting, Los Angeles CA

b. Regional and State:

1981	Oak Ridge National Laboratory Health and Safety Research Division Seminar Committee
1985-1987	Oak Ridge National Laboratory SEED Money Committee
1989 - 1993	Cyclotron Advisory Committee - Univ. of TN Med. Center Chairman
1989 - 1993	Radioisotope and Safety Committee - Univ. of TN Med. Center Chairman
1990 - 1993	Radioactive Drug Rsch. Committee - Univ. of TN Med. Center Chairman
1995	[June 11-15] Served on Scientific Program Committee for the 42nd Annual Meeting of the SNM, Minneapolis, MN

c. Institutional

1993-2005	PET Operations Committee
1993-2006	PET Research Committee
2003-2005	Brain Tumor Executive Committee
2003-2005	Brain Tumor Executive Committee Outside Speaker Chairman

14. Consultantships:

1990 - 1994	Syncor Corporation
2003	Forest Laboratories

15. Honors and Awards:

1976	Outstanding Graduate Teaching and Research Award
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16. Society Memberships:

Society of Nuclear Medicine
American Chemical Society
International Isotope Society

a. Administrative positions:

1996 - 1998	Secretary/Treasurer Radiopharmaceutical Science Council, Society of Nuclear Medicine
1998-2000	President Elect Radiopharmaceutical Science Council, Society of Nuclear Medicine
2000-2002	President Radiopharmaceutical Science Council, Society of Nuclear Medicine
2002-2004	Past-President Radiopharmaceutical Science Council, Society of Nuclear Medicine

18. Research focus:

Research interests encompass PET and SPECT radiotracer development of oncology, brain and heart agents. This emphasis of the is research is on the design and evaluation of peripheral benzodiazepine receptor ligands for imaging peripheral vascular disease and mapping of intracranial tumors, carbohydrates for *in vivo* study of regional glucose metabolism in cancer, alicyclic and branched chain amino acids for *in vivo* mapping of intracranial and systemic tumors, radiolabeled fatty acids for *in vivo* study of regional fatty acid metabolism in heart disorders, cocaine analogs for *in vivo* study of the dopamine, serotonin, and norepinephrine reuptake sites in

neurodegenerative disease, psychiatric and addictive disorders, heterocyclic analogs for *in vivo* mapping of CRF1 receptors in psychiatric disorders, and heteroaromatics for imaging amyloid in AD. In addition to radiotracer development, other research interests include applied research, involving the development of automated devices to facilitate the use of new radiotracers in clinical medicine. My research has resulted in the translation of the first reported synthetic amino alicyclic acid radiolabeled with the PET radioelement fluorine-18 for imaging both intracranial tumors and prostate cancer in patients.

19. Patents:

a. Issued:

1. Knapp, F. F., Jr., **Goodman, M. M.**, Heart Testing Compound, (#4,523,033), 1985.
2. Knapp, F. F., Jr., **Goodman, M. M.**, and Kirsch, G., Radiolabeled Dimethyl Branched Long Chain Fatty Acid for Heart Imaging, (# 4,764,358), 1988.
3. **Goodman, M. M.**, Knapp, F. F., Jr., Radioiodinated Glucose Analogues for Use as Imaging Agents, (# 4,789,542), 1988.
4. **Goodman, M. M.**, Knapp, F. F., Jr, Radioiodinated Branched Carbohydrates, (# 4,826,966 and 4,789,542), 1989
5. **Goodman MM** and Knapp FF, Radiohalogenated Thienylethylamine Derivatives for Evaluating Local Cerebral Blood Flow, U.S. Patent (#4,900,539), dated 2-13-90.
6. **Goodman MM**, Keil R and Shi BZ, Labeled Cocaine Analogs, U.S. Patent granted June 1998 USSN08/949,791.
7. **Goodman MM** and Shoup TM, Amino Acid analogs for Tumor Imaging. U.S. Patent granted June 1998 USSN08/554,906.
8. **Goodman MM** and Shoup TM, Amino Acid analogs for Tumor Imaging. Foreign Patent granted July 1998 96942015. 7-2107.
9. **Goodman MM**, Bing Shi and Robert Keil. Labeled Cocaine Analogs. U.S. Patent granted March 1999, USSN05/888,475
10. **Goodman MM** and Faraj B, Halogenated Naphthyl methoxy Piperidines For Mapping Serotonin Transporter Sites. U.S. Patent granted July 1999, USSN05/919,797.

11. **Goodman MM**, Patterson RE, Alexander RW and Chappell, Haloisoquinoline Carboxamide. U.S. Patent granted December 1999, USSN05/998,624.
12. **Goodman MM** and Shi BZ, Labeled Pyrrolo Isoquinolines, U.S. Patent granted December 2000, USSN06/162,417.
13. **Goodman MM** and Ping Chen, 4-Haloethenylphenyl Tropane: Serotonin Transporter Imaging Agent U.S. Patent granted October 2001, USSN09/553,795.
14. **Goodman MM** and Ping Chen, Fluoroalkenyl Nortropanes U.S. Patent granted February 5, 2002, USSN06/344,179 B1.
15. **Goodman MM** and Ping Chen, 4-fluoroalkyl-3-Halophenyl Nortropanes U.S. Patent granted June 4, 2002, USSN06/399,042.
16. **Goodman MM** and Laurent Martarello, 4-Haloethenyl Nortropanes U.S. Patent granted July 25, 2002, US 2002/0099184 A1.
17. **Goodman MM** and Jonathan McConathy, Tumor Imaging Compounds U.S. Patent assigned May 12, 2003, US03/12748.
18. Shim, Hyunsuk; Liang, Zhongxing; Umbreit, Jay; Taichman, Russel; **Goodman, Mark**. CXCR4 antagonists and methods of their use. PCT Int. Appl. (2004), 95 pp. CODEN: PIXXD2 WO 2004087068 A2 20041014 CAN 141:343466 AN 2004:857337

20. Grant Support:

- 1) Federally funded:
 - a. Active Support and Pending Support

Goodman MM, Purselle DC, Kilts CD, Nemeroff CB, Votaw, JR, Bremner CD, "Development and Applications of Novel PET SERT Ligands", National Institutes of Health, \$1,865,960, 09/01/02-08/31/07. **Goodman MM** - Principal Investigator 09/01/02-08/31/07

Goodman MM, Olson J, Votaw JR, "Development of Novel Fluorinated Amino Acids ", National Institutes of Health, \$380,000, 9/1/03-8/31/05. **Goodman MM** - Principal Investigator.

Goodman MM, Votaw JR, Shim H, Mao, H "Chemistry Functional Imaging Core" National Institutes of Health, \$ 3,470,762, submitted. **Goodman MM** – Core Director 1P01 CA115568-01 "Targeting The HIF Pathway In Hypoxia and Glioblastoma" Van Meir E - Principal Investigator.

2) Contracts:

Goodman MM Development of Tc-99m Labeled Amino Acids for Imaging Amino Acid Transport and Utilization in Man, Nihon Medi-physics, Ltd., Japan. \$400,042, September 1, 2003- August 31, 2006. **Goodman MM** - Principal Investigator

Goodman MM MicroPET Imaging with F-18 Labeled Synthetic Amino Acids in Prostate Cancer Model Rats: Comparison with FDG, Nihon Medi-physics, Ltd., Japan. \$84,721, June 1, 2004- November 1, 2005. **Goodman MM** - Principal Investigator

Nemeroff CB, **Goodman MM**, and Kilts CD " Development Of A Positron Emission Tomography (PET) Radioligand For In Vivo Imaging Of The Brain Norepinephrine Transporter (NET) "Wyeth-Areyst, \$750,000, April 2002- March 2005 **Goodman MM** - Co-Principal Investigator.

Goodman MM, Schuster D Amino Acid Imaging of Prostate Cancer, Nihon Medi-Physics, Ltd., Japan. \$277,000, December 15, 2003-, December 15, 2004. **Goodman MM** -Principal Investigator

b. Previous Support

1) Federally funded:

Knapp Jr, F.F., **Goodman MM**, National Institutes of Health, New Heart Probes: Radioiodinated Branched Fatty Acids, \$300,000, April 1, 1986 -March 31, 1988. **Goodman MM**-Co-Principal Investigator.

Goodman MM Department of Energy, Radioiodinated Carbohydrates, \$100,000, April 1, 1986 - March 31, 1987. **Goodman MM** -Principal Investigator

Kabalka GW, **Goodman MM**, National Institutes of Health, Metallo-Organic Polymers for Labeling Pharmaceuticals, \$327,522, 1988-91, **Goodman MM**- Co-principal Investigator.

Goodman MM, Kabalka GW, Meyer M, Kung M-P, and Bannom M. The Development of New Radiohalogenated Cocaine Analogues for In Vivo Study of The Dopamine Reuptake Site in Neurodegenerative Diseases. U.S. Department of Energy. \$631,205, September 1993-March 1997. **Goodman MM** - Principal Investigator

Bakay RA, Byrd LD, **Goodman MM**, Hoffman JM, Iuvone, PM and Watts RL. CNS Grafting for Parkinsonism. National Institute of Health, \$3,632,799, October 1, 1996-September 30, 2000. **Goodman MM** - Co-Investigator

Goodman MM, Howell L, Hoffman JM, Eshima D. The Development of New Labeled Cocaine Analogues for In Vivo Study of Dopamine Transporter Sites in Neurodegenerative Diseases and Cocaine Addiction. U.S. Department of Energy. \$585,000, March 25, 1997-March 24, 2000. **Goodman MM** - Principal Investigator

Goodman MM, Chen, P., Galt J, Votaw, J. The Development of New Labeled Cocaine Analogues for In Vivo Study of Serotonin Transporter Sites in Psychiatric Disorders and Cocaine Addiction. U.S. Department of Energy. \$650,162, March 25, 2000-March 24, 2003. **Goodman MM** - Principal Investigator

Berns G, Kilts CD, **Goodman MM**, Martarello L. Emory Conte Center for the Neuroscience of Mental Disorders. Functional Imaging Core. National Institute of Health, \$1,011,057, July 1, 1999-June 30, 2004. **Goodman MM** - Co-Principal Investigator

Olson JJ, **Goodman MM**, Schuster D. Imaging Analysis of Amino Acid Metabolism in Intracranial Tumors Using PET and ¹⁸F-FACBC., Nihon Medi-Physics, Ltd., Japan. \$176,806, September 1, 2002-, February 28, 2004. **Goodman MM** - Co-Principal Investigator

2) Private foundation funded:

American Heart Association, Radioimaging of Thrombi in the Pig with Fibrin-Binding 111 In-Fragment E1, \$20,000, July 1, 1988 -June 30, 1989. Co-investigator.

Goodman MM The Development of Fluorine-18 Labeled Heteroaryl Cocaine Analogues to Evaluate Brain Disorders Involving the Dopamine System by PET. The University of Tennessee Medical Center Basic Research Support Grant, \$4,930, March 1991-February 1992. **Goodman MM** - Principal Investigator

Goodman MM and Patterson R. Radiolabelled PK11195 Binding to Atherosclerotic Plaque for Early Detection of Premorbid AVSD by Radioimaging Techniques. American Heart Association, Georgia Affiliate. \$62,000, July 1, 1996-June 30, 1998. **Goodman MM** - Principal Investigator.

3) Contracts:

Goodman MM Development of Iodine-123 Labeled Carbohydrates for Imaging Carbohydrate Utilization in Man, Nihon Medi-physics, Ltd., Japan. \$439,000, September 1, 1994-August 31, 1997. **Goodman MM** - Principal Investigator

Nemeroff C, **Goodman MM**, Kilts C and Shi B. The Study of the Serotonin Transporter in Depression, Solvay Pharmaceutical, \$100,000, January 1996- December 1997 **Goodman MM** - Co-Investigator.

Goodman MM Development of Iodine-123 Labeled Amino Acids for Imaging Amino Acid Transport and Utilization in Man, Nihon Medi-physics, Ltd., Japan. \$444,539, December 15, 2000-, December 14, 2003. **Goodman MM** - Principal Investigator

Goodman MM Development of Iodine-123 Labeled Amino Acids for Imaging Amino Acid Transport and Utilization in Man, Nihon Medi-physics, Ltd., Japan. \$99,250, December 8, 2002- April 30, 2003. **Goodman MM** - Principal Investigator.

Goodman MM Development of Iodine-123 Labeled Amino Acids, Nihon Medi-physics, Ltd., Japan. \$10,396, February 27, 2003- April 30, 2003. **Goodman MM** - Principal Investigator.

21. Clinical Service Contributions;

Name	PetNet facility manager
	Director of PET clinical radiopharmaceutical production

22. Supervisory Teaching:

a. Ph.D. students directly supervised:

Rikki Waterhouse 1989-1993
Jonathan McConathy 1999-2003

b. Post-doctoral fellows directly supervised:

Robert Keil	1994-1995
Bing Shi	1994-1996
Eric Wang	1994-1996
Amy Xing	1995-1997
Ronald Voll	1995-1998
Laurent Martarello	1997-2001
Ping Chen	1997-2000

Nachwa Jarkas	1998-present
Christophe Plisson	2001-2003
Wei-Ping Yu	2001-present
Fanxing, Zeng	2002-present
Hui-Yan	2002-2004
Jeffrey Stehouwer	2002-present
Jiyoung Mun	2004-present

c. Other

Summer Research:

Benjamin Cohen (2 Summers)
 Robin R. Goodman (2 Summer)
 Andrew DePompei (1 Summer)

Visiting Professor:

Gilbert Kirsch, Ph.D.

23. Lectureships, Seminar Invitations, and Visiting Professorships:

University of Tennessee, Department of Chemistry, Knoxville TN, Invited Professor, 1993
 Massachusetts General Hospital, Boston MA, Invited Professor, 1994
 University of Ulm, West Germany, Invited Professor, 1996
 University of Metz, France, Invited Professor, 1997
 University of Metz, France, Invited Professor, 1999
 Wake Forest University, Winston Salem, NC, Invited Professor, 2002
 Vanderbilt University, Nashville TN, Invited Professor, 2003
 Brigham Hospital, Boston MA, Invited Professor, 2004

24. Invitations to National or International Conferences:

International Society of Isotopically Labelled Compounds, 4 th International Symposium, Toronto, Canada, Synthesis and Applications of Organic Compounds Labelled with Isotopes of Elements Other Than Carbon, 1991

Third International Symposium on Radiohalogen Chemistry, Banf, Canada, 1992

American Chemical Society 206 th National Meeting, Chicago Illinois, Chemists' View of Imaging Center, 1993.

International Society of Isotopically Labelled Compounds, 5 th International Symposium, Strasbourg, France, Synthesis of Radiohalogen Brain Imaging Agents, 1994

International Society of Isotopically Labelled Compounds, 7 th International Symposium, Dresden, Germany, Applications of Isotopes in Pharmacological, Medical, and Clinical Research 2000

International Society of Isotopically Labelled Compounds, 8 th International Symposium, Boston, MA, USA, Applications of Isotopes in Pharmacological, Medical, and Clinical Research 2003

Fifth International Symposium on Radiohalogen Chemistry, Whistler, Canada, 2004

44 Th. Japanese Society of Nuclear Medicine, Kyoto, Japan, PET Tumor Imaging Using Fluorine-18 Amino Acids, 2004

25. Bibliography;

a. Publications (Journals):

1. Paudler WW, Zeiler AG, and **Goodman MM**. The Formation of a Stable o-Semidine Rearrangement Intermediate, Journal of Hetrocyclic Chemistry 1973;423-424.
2. **Goodman MM**, Atwood JL, and Paudler WW. Tetrazolo (1,5-b)-1,2,4-triazines: Syntheses and Structure Determination, Journal of Organic Chemistry 1976;41: 2860-2864.
3. **Goodman MM** and Paudler WW. 2,3-Dihydro-3-azido-5-oxo-1,2,4-triazines and Related Compounds. Synthesis and Structure Elucidation, Journal of Organic Chemistry 1977; 42:1866-1869.
4. **Goodman MM** and Paudler WW. 3-Azido-1,2,4-triazine-N-oxides: Syntheses and Structure Elucidation, Journal of Heterocyclic Chemistry 1977;14:1221-1223.
5. Sharma RA, **Goodman MM**, and Bobek B. Synthesis and Biological Activity of 5-ethynl-Cytidine and 5-ethynl-Ara-C, Journal of Carbohydrates, Nucleosides and Nucleotides 1980;7:21-34.
6. Elmaleh DR, Kearfott K, **Goodman MM**, Varnum D, Lede R, Ackerman RH, Strauss HW, and Brownell GL. A Comparison of 18F Sugar Analogues in Animals, Medical Applications of Cyclotrons II, Annual of University Turkunesis D:13, 1981;156-160.
7. **Goodman MM**, Elmaleh DR, Kearfott KJ, Ackerman RH, Hoop B, Brownell GL, Alpert NM, and Strauss WH. F-18-Labeled-3-Deoxy-3-Fluoro-D-Glucose for the Study of Regional Metabolism in the Brain and Heart, Journal of Nuclear Medicine 1981;22:138-144.
8. Elmaleh DR, **Goodman MM**, Kearfott K, Correia JA, Alpert NM, Varnum D, Ackerman RH, Strauss HW, and Brownell GL. 18F Sugar Analogue for Studies of Tissue Metabolism, Medical Applications of Cyclotrons II, Annual of University of Turkunesis D:13, 1981;153-155.

9. **Goodman MM, Knapp FF, Jr, Callahan AP, and Ferren LA.** Synthesis and Biological Evaluation of 17-[¹³¹I]Iodo-9-Telluraheptadecanoic Acid, A Potential Myocardial Imaging Agent, Journal of Medicinal Chemistry 1982;25:613-618.
10. **Goodman MM and Knapp FF, Jr.** Synthesis of 15-(p-Iodophenyl)-6-Tellurapentadecanoic Acid: A New Myocardial Imaging Agent, Journal of Organic Chemistry 1982;47:3004-3006.
11. **Goodman MM, Knapp FF, Jr, Callahan AP, and Ferren LA.** A New, Well-retained Myocardial Imaging agent: Radioiodinated 15-(p-Iodophenyl)-6-Tellurapentadecanoic Acid: Journal of Nuclear Medicine 1982;23:904-908.
12. **Knapp FF, Jr, Goodman MM, and Callahan AP.** Radioiodination of 15-(p-Iodophenyl)-6-Tellurapentadecanoic Acid by Triazene Decomposition with Radioiodide J. Labelled Comp. Radiopharm. 1982; 19, 1323-1325.
13. **Goodman MM, Kirsch G, and Knapp FF, Jr.** Synthesis of Radioiodinated w-(p-Iodophenyl)-Substituted Methyl-Branched Long-Chain Fatty Acids, J. Labelled Comp. Radiopharm. 1982; 19: 1316-131.
14. **Glisch GL, McBay EH, Goodman MM, and Knapp FF, Jr.** The Fragmentation of Chalcogen-Containing Fatty Acids and Their Methyl Esters, Journal of Biological Medical Spectrometry 1983;10:572-576.
15. **Goodman, M. M., and Knapp, F. F., Jr.,** A Convenient Synthesis of Unsymmetrical Organotellurides of Biological Interest, Organometallics 1983;2:1006-1008.
16. **Kirsch G, Goodman MM, and Knapp FF, Jr.** Organo-tellurium Compounds of Biological Interest - Unique Properties of the Te(IV) Oxidation Product of 9-Telluraheptadecanoic Acid, Organometallics, 1983;2:357-363.
17. **Knapp FF, Jr, Goodman MM, Kabalka GW, Callahan AP, Ferren LA, and Sastry KAR.** New Myocardial Imaging Agents: Stabilization of Radioiodine as a Terminal Vinyl Iodide Moiety on Tellurium Fatty Acids, Journal of Medicinal Chemistry 1983;26:1293-1300.
18. **Bianco JA, Alpert JS, Pape LA, Zheng M, Hnatowich D, Goodman MM, and Knapp FF, Jr.** Accumulation of Radioiodinated 15-(p-iodophenyl)-6-tellurapentadecanoic Acid in Ischemic Myocardium During Acute Coronary Occlusion and Reperfusion, Journal of the American College of Cardiology 1984;4:80-87.

19. **Goodman MM**, Kirsch G, and Knapp FF, Jr. Synthesis and Evaluation of Terminal Radioiodinated Iodothienyl-Substituted Fatty Acids for Myocardial Imaging, Journal of Heterocyclic Chemistry 1984;21:1579.
20. **Goodman MM**, Knapp FF, Jr, Elmaleh DR, and Strauss HW. New Myocardial Imaging Agents: Synthesis of 15-(p-Iodophenyl)-3-(R,S)-Methylpentadecanoic Acid by Decomposition of a Piperidinyl Triazene Precursor, Journal of Organic Chemistry 1984;49:2322-2325.
21. **Goodman MM**, Kirsch G, and Knapp FF, Jr, Synthesis and Evaluation of Radioiodinated Terminal p-Iodo-phenyl-Substituted α - and β -Methyl-Branched Fatty Acids, Journal of Medicinal Chemistry 1984;27:390-397.
22. Kearfott KJ, Elmaleh DR, **Goodman MM**, Correia JA, Alpert NM, Ackerman RH, Brownell GL, and Struss WH. Comparison of 2- and 3-18F-Fluoro-deoxy-D-glucose for Studies of Tissue Metabolism, International Journal of Nuclear Biology 1984;11(1):15-22.
23. Knapp FF, Jr, **Goodman MM**, Kabalka GW, and Sastry KAR. Synthesis and Evaluation of Radioiodinated (E)-18-Iodo-17-octadecenoic Acid as a Model Iodoalkenyl Fatty Acid for Myocardial Imaging, Journal of Medicinal Chemistry 1984;27: 94-97.
24. **Goodman MM**, Cunningham EB, and Knapp FF, Jr. Design, Synthesis and Evaluation of w-Iodoalkyl-Substituted Methyl-Branched Long Chain Fatty Acids, J Labelled Comp. Radiopharm. 1984; 1086-1088.
25. **Goodman MM**, Knapp FF, Jr, Richards P, and Mausner LF. A New Kit for the Rapid Regiospecific Synthesis of 15-(p-[123I]iodophenyl)penta decanoic Acid, Journal of Radioanalytical Chemistry 1985;89:63-70.
26. **Goodman MM**, Callahan AP, and Knapp FF, Jr. Design, Synthesis and Evaluation of w-Iodovinyl and w-Iodoalkyl-Substituted Methyl-Branched Long-chain Fatty Acids, Journal of Medicinal Chemistry 1985;28:807-815.
27. Yonekura Y, Brill AB, Som P, Yamamoto K, Srivastava SC, Iwai J, Elmaleh DR, Livni E, Strauss HW, **Goodman MM**, and Knapp FF, Jr. Regional Myocardial Substrate Uptake in Hypertensive Rats: A Quantitative Autoradiographic Measurement, Science 1985;227:1494-1496.
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